REMARKS

Claims 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, and 37-46 are pending in this application. Claims 3 and 7 are amended herein. Support for the amendments may be found in the claims as originally filed. No new matter has been added. Reconsideration is requested based on the foregoing amendment and the following remarks.

Interview Summary

The Applicants submit the following summary of the telephone interview that took place September 25, 2006 between the undersigned representative of the Applicants and the Examiner.

Telephone Conference:

The Applicants thank the Examiner for the many courtesies extended to the undersigned representative of the Applicants during the telephone interview that took place September 25, 2006.

Among the issues discussed during that interview was the availability of U.S. Patent No. 7,024,671 to Yamashita, (hereinafter "Yamashita") as a reference under 35 U.S.C. § 103(a). Yamashita is assigned on its face to Fujitsu Limited, to which the subject application is assigned as well. Yamashita is therefore submitted to be disqualified as a reference against the subject application under 35 U.S.C. § 103(c)(1). As provided therein:

> Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the same person.

The Examiner agreed to reconsider the validity of the rejection under 35 U.S.C. § 103(a) based on Yamashita upon receipt of this further response.

Claim Rejections - 35 U.S.C. § 112:

Claims 1, 3, 5, 7, 9, 11, 15, 17, 19, 21, 23, 27, 29, 31, 33, and 35 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite. Claims 3 and 7 were amended to make them more definite. In particular, the "last named processor is now "another processor" in claims 1 and 3. Withdrawal of the rejection is earnestly solicited.

Claim Rejections - 35 U.S.C. § 103:

Claims 1, 3, 5, 7, 9, 11, and 37-46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamashita in view of U.S. Patent No. 6,061,711 to Song et al. (hereinafter "Song"). The rejection is traversed. Reconsideration is earnestly solicited.

In several embodiments, the storing section, the store control section, the stop control section, and the start control section of independent claims 1, 44, and 45 handle handover information. The handover information is used for performing tasks carried out on two or more processors. In particular, when the control section switches a task from one processor element to another processor element, the handover information used for the performance of the task by the first processor (i.e. before switching) is also used for the performance of the task by the second processor (i.e. after switching).

The fifth clause of claim 1 recites:

> Storing handover information relating to the common program which information is to be handed over from said one processor element to said another processor element.

Neither Yamashita nor Song teach, disclose, nor suggest "storing handover information relating to the common program which information is to be handed over from said one processor element to said another processor element," as recited in claim 1. Yamashita, rather, assigns a job being executed to a *plurality* of PEs performs the migration process. In particular, as described at column 1, lines 63-65 and at column 2, lines 53-56:

> The assigning device assigns a job being executed to a plurality of PEs so that the migration process of the job is performed, if it is determined that the job is to be moved to a different PE.

Since, in Yamashita, the migration process is performed by assigning a job being executed to a plurality of PEs, Yamashita has no need for "storing handover information relating to the common program which information is to be handed over from said one processor element to said another processor element," as recited in claim 1.

In Yamashita, furthermore, the job migration process indicates a process for moving a job being executed by one PE to a different PE as the job *continues* to be executed. In particular, as described at column 2, lines 57, 58, and 59:

> The job migration process indicates a process for moving a job being executed by one PE to a different PE as the job continues to be executed.

Since, in Yamashita, the job migration process indicates a process for moving a job being

executed by one PE to a different PE as the job continues to be executed, Yamashita has no need for "storing handover information relating to the common program which information is to be handed over from said one processor element to said another processor element," as recited in claim 1.

Furthermore, in Yamashita, a job execution is suspended, and data (part or the whole of information about a job) representing the running state at that time is packed in a file and stored *outside* a PE. In particular, as described at column 4, lines 42-46:

> Here, job freezing means that job execution is suspended, and data (part or the whole of information about a job) representing the running state at that time is packed in a file and stored outside a PE. The degree of parallelism of a job indicates the number of PEs required to execute the job, and the memory size of a job indicates the memory amount used by the job.

Since, in Yamashita, a job execution is suspended, and data representing the running state at that time is packed in a file and stored outside a PE, Yamashita has no need for "storing handover information relating to the common program which information is to be handed over from said one processor element to said another processor element," as recited in claim 1.

Furthermore, in Yamashita, a frozen *job* is read from the external auxiliary storage device 23 and unfrozen, so that its operations are continued. In particular, as described at column 5, lines 7-15:

> The frozen job is then read from the external auxiliary storage device 23 and unfrozen, so that its operations are continued (resumed). Here, job unfreezing represents a process for restoring the information of a job that is frozen and stored in the external auxiliary storage device 23 on a PE. The PE on which the job is unfrozen is the PE that freezes the job or a different PE. If the PE on which the job is unfrozen is different from the original PE, the job will move eventually.

Since, in Yamashita, a frozen job is read from the external auxiliary storage device 23 and unfrozen, so that its operations are continued, Yamashita has no need for "storing handover information relating to the common program which information is to be handed over from said one processor element to said another processor element," as recited in claim 1.

Furthermore, in Yamashita, two *jobs* job_ZZ and job_CC running on the PE1 through PE 3 are selected, and saved in the external auxiliary storage device 23. In particular, as described at column 7, lines 30, 31, and 32:

> In FIG. 6, two jobs job_ZZ and job_CC running on the PE1 through PE 3 are selected, and saved in the external auxiliary storage device 23. The first job in the queue 33 is then executed by using the resources that are made unused.

Since, in Yamashita, two jobs job_ZZ and job_CC running on the PE1 through PE 3 are selected, and saved in the external auxiliary storage device 23, Yamashita has no need for "storing handover information relating to the common program which information is to be handed over from said one processor element to said another processor element," as recited in claim 1.

Furthermore, in Yamashita, in case of migration, packed data is transferred to a PE at a migration destination, and unpacked. In particular, as described at column 8, lines 40-45:

> In case of freezing, packed data is written to an external auxiliary storage device as a file. In case of migration, packed data is transferred to a PE at a migration destination, and unpacked. By packing and saving/transferring all the data relating to a job as described above, the resources occupied by the job on a PE can be completely released.

Since, in Yamashita, in case of migration, packed data is transferred to a PE at a migration destination, and unpacked, Yamashita has no need for "storing handover information relating to the common program which information is to be handed over from said one processor element to said another processor element," as recited in claim 1.

Finally, in Yamashita, the save operation of a *job* in an external auxiliary storage device by freezing the job is combined with the migration of the job between PEs, to enhance scheduling. In particular, as described at column 14, lines 15-18:

> (3) Performing more enhanced scheduling by combining the save operation of a job in an external auxiliary storage device by freezing the job, with the migration of the job between PEs.

Since, in Yamashita, the save operation of a job in an external auxiliary storage device by freezing the job is combined with the migration of the job between PEs, Yamashita has no need for "storing handover information relating to the common program which information is to be handed over from said one processor element to said another processor element," as recited in claim 1.

Song, for its part, is about context switching between *programs*, not processor elements. In particular, as described in Song at column 2, lines 7, 8, and 9:

> The present invention advantageously reduces the amount of processor time needed to context switch between programs.

Since Song is about context switching between programs, Song has no need for "storing handover information relating to the common program which information is to be handed over from said one processor element to said another processor element," either, and thus cannot make up for the deficiencies of Yamashita with respect to claim 1. Thus, even if Yamashita and

Song were combined, the claimed invention would not result.

The third clause of claim 1 recites:

Detecting a switching request signal to request switching such plural processor elements one from another

Yamashita neither teaches, discloses, nor suggests "detecting a switching request signal to request switching plural processor elements one from another," as acknowledged graciously in section 6 of the Office Action at page 4. The Office Action seeks to compensate for this deficiency of Yamashita by combining Yamashita with Song.

Song, however, is about context switching between programs, not processor elements, as discussed above, and thus cannot make up for this deficiency of Yamashita with respect to claim 1 in any case. As described in Song, rather, at column 2, lines 52-60:

The computing system further includes a second memory coupled to the first processor, a context switch request detector operating on the first processor for detecting, after the processor encounters one of the markers in an executing program, a request to context switch out the program, and a context saving module operating on the first processor for responding to a detected context switch request by saving in the second memory processor state information located in the first memory.

Thus, Song is about detecting a request to context switch out the program running on a first processor, and responding to the detected context switch request by saving state information located in the first memory in the second *memory* processor, not a second processor element. Therefore, even if Yamashita and Song were combined as proposed in the Office Action, the claimed invention would not result.

The Office Action seeks to justify the combination of Yamashita and Song in section 7 of the Office Action, at page 4, by saying that,

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Yamashita and Song because Song's switching signal detecting section for detecting a switching signal to request switching such plural processor elements one from another would improve the efficiency of computer resource.

Yamashita, however, has no *need* for "detecting a switching request signal to request switching plural processor elements one from another" since, as discussed above, the migration process is performed by assigning a job being executed to a *plurality* of PEs, rather than "switching plural processor elements one from another." It is submitted, therefore, that even if Song did teach switching plural processor elements one from another, persons of ordinary skill in the art who

read Yamashita for all it contained at the time the invention was made would not have been motivated to modify Yamashita as proposed in the Office Action, since it would have served no purpose. Claim 1 is submitted to be allowable. Withdrawal of the rejection of claim 1 is earnestly solicited.

Claims 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, and 37-43 depend from claim 1 and add additional distinguishing elements. Claims 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, and 37-43 are thus also submitted to be allowable. Withdrawal of the rejection of claims 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, and 37-43 is earnestly solicited.

Claim 44:

The second clause of claim 44 recites:

Detecting a switching request signal to request switching such plural processor elements one from another.

Neither Yamashita nor Song teach, disclose, or suggest "detecting a switching request signal to request switching such plural processor elements, one from another," as discussed above with respect to claim 1

Furthermore, persons of ordinary skill in the art would have not been motivated to combine Yamashita with Song, as proposed in the Office Action, as also discussed above with respect to claim 1.

The third clause of claim 44 recites:

Storing handover information relating to the common program, which information is to be handed over from said one processor element to said another processor element, into a storing section of said multiprocessor system.

Neither Yamashita nor Song teach, disclose, or suggest "storing handover information relating to the common program, which information is to be handed over from said one processor element to said another processor element, into a storing section of said multiprocessor system," as discussed above with respect to claim 1. Claim 44 ought thus to be allowable as well, for at least those reasons discussed above with respect to claim 1. Withdrawal of the rejection of claim 44 is earnestly solicited.

Claim 45:

The second clause of claim 45 recites:

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Detecting a switching request signal to request switching such plural processor
elements one from another.

Neither Yamashita nor Song teach, disclose, or suggest "detecting a switching request signal to
request switching such plural processor elements, one from another," as discussed above with
respect to claim 1.

Furthermore, persons of ordinary skill in the art would have not been motivated to
combine Yamashita with Song, as proposed in the Office Action, as also discussed above with
respect to claim 1.

The third clause of claim 45 recites:

Storing handover information relating to the common program, which information
is to be handed over from said one processor element to said another processor
element, into a storing section of said multiprocessor system.

Neither Yamashita nor Song teach, disclose, or suggest "storing handover information relating to
the common program, which information is to be handed over from said one processor element
to said another processor element, into a storing section of said multiprocessor system," as
discussed above with respect to claim 1. Claim 45 ought thus to be allowable as well, for at
least those reasons discussed above with respect to claim 1. Withdrawal of the rejection of
claim 45 is earnestly solicited.

Claim 46:

The third clause of claim 46 recites:

Storing handover information relating to the execution of the common program by
said first processor element before said handover for use by said second
processor after said handover.

Neither Yamashita nor Song teach, disclose, or suggest "storing handover information relating to
the execution of the common program by said first processor element before said handover for
use by said second processor after said handover." as discussed above with respect to claim 1.
Claim 46 is thus believed to be allowable as well, for at least those reasons discussed above
with respect to claim 1. Withdrawal of the rejection of claim 46 is earnestly solicited.

Allowable Subject Matter:

The Applicant acknowledges with appreciation the indication that claims 9, 13, 15, 19,
21, 23, 25, 27, 29, 31, 33, and 35 contain allowable subject matter.

Conclusion:

Accordingly, in view of the reasons given above, it is submitted that all of claims 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, and 37-46 are allowable over the cited references. Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.
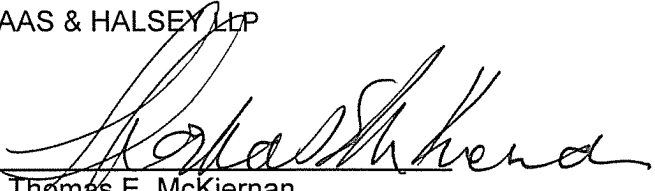
If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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